Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

TITLE V (PROPOSED PERMIT) NO. V-03-021
DANA CORPORATION – VICTOR REINZ
DANVILLE, KY
JUNE 27, 2003
JOSHUA J. HIGGINS, REVIEWER
PLANT I.D. # 21-021-00049
APPLICATION LOG # 55322

SOURCE DESCRIPTION:

The DANA Corporation – Victor Reinz Division at 500 Techwood Lane in Danville (Boyle County), manufactures automotive steel gaskets. They have been registered as a minor source since February 2000 (Log # 51361). In October 2002 the facility applied for modification to their minor source registration due to a formulation change used in some of their coatings, and to add additional equipment. This registration was approved in November 2002 (Log # 55282). This permit is being issued based on the fact that the facility is planning an upgrade in the spring of 2003. With the upgrade the facility will consist of two Multi-Layer Steel (MLS) gasket production lines. Each line will consist of a series of coating applicators and drying ovens. In April 2003, in the midst of the Title V review process, DANA submitted a registration (Log # 55689) for construction of a Compact Valveless Regenerative Thermal Oxidation (VRTO) System. Even though the VRTO was submitted as a part of the Title V application, the Division approved the registration because of the fact that the facility was an existing registered source, would remain eligible for registration after the change (401 KAR 52:070, Section 4(2)(a)), and that immediate installation of the control device would be environmentally beneficial.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

APPLICATION COMMENTS:
Title V, Log # 55322

COMMENTS:

Permit Processing Timeline:

The draft permit was issued within the regulatory time frame. See the requirements in Section 2 of the Cabinet Provisions and Procedures for Issuing Title V Permits manual, which is incorporated by reference in 401 KAR 52:020, and the dates of significant events listed below.

November 8, 2002. Application Received.
January 8, 2003. Application deemed administratively complete by default (even though it lacked all required technical information).
January 10, 2003. Application assigned to reviewer.
February 19, 2003. Telephonic Notice of Deficiency (NOD) for corrections to 7007B and N forms, and clarification of EP 04 emission factors. Regulatory clock stopped.
February 20, 2003. Information received and NOD deemed complete. Regulatory clock resumed.
February 28, 2003. NOD letter issued for lack of control device. Regulatory clock stopped.
March 11, 2003. Telephonic NOD for confirmation of insignificant activities and removal of previously registered equipment.
March 13, 2003. Information received and 03/11/03 NOD deemed complete.
March 19, 2003. Control device information received.
April 7, 2003. Additional control device information received and 02/28/03 NOD deemed complete. Regulatory clock resumed.
April 15, 2003. Meeting between DAQ, and the source and their consultant. NOD for mixing and clean-up operations emission factors. Regulatory clock stopped.
April 25, 2003. Draft permit approved, assuming mixing and clean-up operations will be insignificant activities. However, a "worst case" scenario was applied to the material balance equation by including these emissions.

Type of control and efficiency:

Type: Compact Valveless Regenerative Thermal Oxidation System
Model: VRTO-C
Manufacturer: Eisenmann
Destruction Efficiency: 99%
Burner/Combustion Chamber: Single Maxon or equivalent burner
Fuel: Natural Gas
Rated capacity: 6 mmBtu/hr
Date constructed: 2003 (anticipated)

Emission factors and their source:

A combination of AP-42 emission factors, material balance, site testing and vendor guarantees have been used to estimate emissions in the application.

Applicable regulation:

Note: Only specific regulations have been listed here, no generally applicable regulations are listed.
401 KAR 59:225, *New Miscellaneous Metal Parts and Products Surface Coating Operations,* applies to the VOC emissions of the two MLS coating lines.

Anything unusual about the:

1) Emission point number and description.

Emission point numbers in parenthesis within the permit are EP numbers provided by the source. These emission points were then grouped together by coating line to create one EP for each coating line. Emission points that are not a part of the coating lines and are not subject to 401 KAR 59:225 are listed as separate emission points, but grouped together within Section B to save space.

The Electric Batch Oven was included as a component of MLS Line 1 and 2 on the draft permit. With the proposed permit, the oven is listed as a separate emission point (EP 03), but is still grouped with the other coating lines because it is subject to 401 KAR 59:225. With this change from the draft to the proposed permit, the EP numbers of the points following the Electric Batch Oven were all adjusted accordingly.

The description of the manufacturer of the ovens associated with MLS Line 2 were changed from "Moco" in the draft permit to "Feco" in the proposed permit. This was based on revised DEP7007B Forms received along with the applicant's comments.

2) Regulations that are not applicable. There are currently no National Emission Standards for Hazardous Air Pollutants (NESHAPs) regulations that apply to the source as long as metal gaskets are the only types of gaskets produced. See the determination letter from the Division to the source dated February 28, 2003 for more details.

EMISSION AND OPERATING CAPS DESCRIPTION:

Emission Limitations. Pursuant to 401 KAR 59:225, Section 3, emissions discharged into the atmosphere from the coating lines shall be no more than fifteen (15) percent by weight of the VOCs net input into the affected facility.

Operating Limitations. Performance testing will determine the minimum combustion temperature for the VRTO and the minimum average gas volumetric flow rate or duct static pressure for each specific capture device in the capture system. Additionally, emissions from all processes listed in the permit as a portion of the coating lines shall be vented to the VRTO at all times, and the VRTO shall be operational at all times that either of the two coating lines is operating.

PERIODIC MONITORING:

See the permit for Specific Monitoring Requirements.

PUBLIC AND U.S. EPA REVIEW:

On May 4, 2003 the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in the newspaper of largest circulation in Boyle County. The public comment period expired 30 days from the date of publication. During this time, the only comments received were from DANA Corporation in a packet received May 27, 2003. The Division's response to these comments is included in Attachment A to this section. Additionally, DANA Corporation requested a public hearing to coincide with the public comment period. The hearing was held on May 28, 2003, and no comments were received.

The 45-day EPA review period began on the date on the front of this document. If no comments are received from the EPA during this time, the proposed permit will become the final permit.

Attachment A
Draft Title V Permit Comments from
DANA Corporation, Victor Reinz Division
Danville, KY

- Comment 1: In the summary form, the emissions do not match what was submitted. We are assuming the addition of the RTO is the contributing factor to the increased PM/PM10, SOx and NOx. The SOx emissions reflect an error originally submitted as Table 2. This has been updated. Also, per our telephone conversation on May 23, 2003, ethanol should not be included as a HAP on EP-11 and EP-16.

Division's Response:

The Emissions Summary table included with the Permit Application Summary Form issued with the draft permit did include emissions from the 6 mmBtu/hr natural gas burner associated with the VRTO. It also included an erroneous SO_2 emissions value carried over from Table 2 of the original application. No Hazardous Air Pollutants (HAPs) emitted by the source were listed on the Emissions Summary table because the table specifically asks for HAP emissions greater than or equal to 10 tons per year (tpy). HAP emissions were included, however, in the Kentucky Emissions Inventory System (KyEIS) database (I-Steps) for the source. The Division concurs that ethanol (or ethyl alcohol, CAS # 64-17-5) is not a HAP as listed in 401 KAR 63:060, Section 2, but it was included in I-Steps due to the fact that it is emitted by the source. Both the Emissions Summary table and I-Steps were updated based on identification of the erroneous SO_2 emissions value, other information submitted with the applicant's comments, and with cleaning and mixing operations emissions information received June 13, 2003.

- Comment 2: In the summary form, the source process description explains the minor source registration update in October 2002 was for coating reformulation. This was also to add a Hard Coat Oven and Aqueous Wash System.

Division's Response:

The DEP7007B forms in the original application for the Hard Coat Oven and associated Aqueous Wash System list the installation date as anticipated for 2003. However, addition of the equipment in October 2002 was confirmed with registration application Log # 55282 and Table 2 of the original application. The statement in the Permit Application Summary Form and Statement of Basis was revised to include the addition of the equipment, and the description of the installation date for these points in the permit was revised to 2002.

- Comment 3: In the Permit Statement of Basis, DANA disagrees with the timeline. Specifically, if the clock was stopped on February 28, 2003 for lack of pollution control information, it should have resumed on March 19, 2003, which is the day the DAQ received this information. Also on April 15, 2003 DANA conveyed to DAQ that the emission factor for mixing and cleaning were assumed to be zero. DAQ requested DANA to attempt to quantify the emission factors through testing, but at no time was it conveyed that this would stop the clock. DANA assumed this was just confirmation from the previous assumption that was stated in the permit application. At this time DANA has confirmed that the emissions from the cleaning operations are inconsequential. Additional testing is being performed to conclusively report the findings from the mixing testing.

Division's Response:

The response to the NOD issued for lack of control device information received on 03/19/03 contained contradictory information regarding which emission points would be controlled by the device. Specifically, emission calculations submitted with the VRTO information indicated that all eight ovens associated with the MLS lines would vent to the control device, but page 9 (Function Description) of the information from the Eisenmann Corporation (the VRTO manufacturer) indicated that only "the process streams from the 4 MLS ovens, … are collected and sent to the VRTO-C system." This NOD was deemed complete on 04/07/03 when clarifying information was received.

The Division would like to point out that nowhere in the original application was reference made to mixing and cleaning operations, and that, other than assumptions, no definitive mixing and cleaning operation emission factors and potential emissions were included in any information received until June 13, 2003. The Division also reiterated in a letter on June 4, 2003 that mixing and cleaning operations are considered to be a portion of a coating line [401 KAR 59:225, Section 1(7)], and that the source is considered a major source based on the emissions from these coating lines. Therefore, mixing and cleaning operation emissions can not be considered inconsequential or insignificant and are required to be reported as a part of the application [401 KAR 52:020, Section 5(3)(a)]. The letter also reiterated that, as requested in the meeting on 04/15/03 between DAQ and DANA, as cited in Section B, paragraph 2.b. of the draft permit, and as the applicant has a duty to supplement their application [401 KAR 52:020, Section 7], the emission factors and potential emissions from these operations had to be reported on the appropriate forms prior to issuance of the proposed permit. Even though the mixing and cleaning operations emissions information received on June 13, 2003 was not reported on the appropriate forms, the Division deemed the information sufficient to meet the submittal requirements. As a result, the statement from paragraph 2 requiring the permittee to submit the emission factors prior to issuance of the proposed permit was removed.

- Comment 4: On page 2 of 19 of the draft permit, EU-22 is considered a part of EP 1. On page 3 of 19, EU-22 is a part of EP 2. This electric oven should be a stand-alone emission unit.

Division's Response:

As a result of a tour of the facility to confirm process operations, the Electric Batch Oven was listed separately in the permit as EP 03. Since this process unit was removed from the list of MLS production line emission units, Operating Limitation 1.d. and the Emission Limitation in paragraph 2 were revised to include the Electric Batch Oven as a separate emission point.

Additionally, all EP numbers following the Electric Batch Oven were revised to reflect the addition of the oven as a separate point.

- Comment 5: On page 3 of 19 of the draft permit, it is not understood what is asked for in 1b. Is this the volumetric flow rate determined in the capture efficiency test? Please explain.

Division's Response:

Yes, either the volumetric flow rate or duct static pressure for each capture device in the capture system is determined during performance testing. The bracketed statement at the end of condition 1b. was revised to include reference to both paragraphs 3d. and e. on page 5 of 19. Paragraph 3d. instructs the permittee to determine capture efficiency utilizing the most applicable procedure for their facility from Method 204, Appendix M to 40 CFR Part 51, and paragraph 3e. explains that the average volumetric flow rate or duct static pressure determined for each capture device in the capture system will become the minimum operating limit for the specific capture device.

Additionally, as the result of reviewing this comment, the bracketed statement at the end of condition 1a. was corrected to reference paragraph 3c. instead of 3b.

- Comment 6: On page 4 of 19 of the draft permit, 2c refers to the averaging for one coating line.

It is assumed that the "one coating line" is used to site which equipment is being addressed. Please explain.

Division's Response:

The statement is taken directly from 401KAR 59:225, Section 4(5), as referenced in the permit, and explains how to calculate compliance with the standard. The reference to "one coating line" does not refer to only MLS Line 1, but to the fact that compliance must be calculated for each coating line, individually, during each 24-hour period. The statement in the permit has been revised to more clearly reflect that compliance must be calculated for MLS Line 1, MLS Line 2, and the Electric Batch Oven, individually, during each 24-hour period.

With the removal of the requirement to submit mixing and cleaning operation emission factors prior to issuance of the proposed permit, 2c. from the draft permit is now 2b. in the proposed permit.

- Comment 7: On page 4 of 19 of the draft permit, 2d requests a plan for operation of the RTO. What is the timeline for submittal?

Division's Response:

Submittal shall be prior to startup of MLS Line 2 and the VRTO. The statement in the permit has been revised.

With the removal of the requirement to submit mixing and cleaning operation emission factors prior to issuance of the proposed permit, 2d. from the draft permit is now 2c. in the proposed permit.

- Comment 8: On page 4 of 19 of the draft permit, can the readout be expressed in Fahrenheit instead of Celsius? What if the RTO thermocouple cannot obtain this accuracy?

Division's Response:

Yes, the readout can be expressed in Fahrenheit instead of Celsius. This decision was based on the fact that the EPA's proposed Maximum Available Control Technology (MACT) standard for the emission of HAPs from Surface Coating of Miscellaneous Metal Parts and Products expresses the temperature monitoring device accuracy in Fahrenheit. The permit was revised to indicate the accuracy of the monitoring device may be expressed in either Celsius or Fahrenheit.

The Division feels that the source should reasonably be able to obtain a temperature measurement device that can provide the accuracy expressed in the permit. Although National Emission Standards for Hazardous Air Pollutants (NESHAPs) currently do not apply to the source, the language used in this portion of the permit can be found in many different surface coating MACT standards, and was used because the source is in a similar type industry employing similar controls.

- Comment 9: On page 5 of 19 of the draft permit, 3e discusses the volumetric flow rate for each capture device. How will this information be obtained on an ongoing basis during production, or does it need to be? Is a readout necessary?

Division's Response:

This information, along with the VRTO combustion chamber temperature, does need to be obtained on a continuous basis, and does need a continuous readout. This information should be obtained through whatever system that is capable of producing a continuous permanent record (i.e.: strip-chart, etc.) that works best with existing processes and equipment.

The Division felt that this was expressed through the Operating and Emission Limitations and paragraph 5.c., h., and i. for the VRTO and capture system. However, to eliminate any possibility of ambiguity, the following statement was added to the end of paragraph 5.c. for the VRTO and capture system: "…including continuous permanent records of the VRTO combustion chamber temperature

and gas volumetric flow rate or duct static pressure for each separate capture device in the system."

- Comment 10: On page 5 of 19 of the draft permit, 5b requests information on the application method and substrate. Is this referring to the screen printers and steel?

Division's Response:

The term "application method" refers to how the coating is applied (i.e.: roll-coater, spray booth, screen printer, etc.), and "substrate" refers to what the coating is being applied to.

- Comment 11: On page 5 of 19 of the draft permit, 5f requires the records for clean up. Is water considered an exempt compound? What information is being collected if there is no emission factor for this?

Division's Response:

Water is generally considered an exempt compound, but 401 KAR 59:225, Section 4(8)(f) clearly states exempt compounds used as surface preparation, clean up, or wash-up solvents must also be reported. Depending on the process and how the solvents and compounds are used, these records may be necessary for determining accurate mixing ratios, emission factors, and net input of VOCs.

- Comment 12: On page 7 of 19 of the draft permit, EP 06 and EP07 (EU 20, 21) were added to the minor source in 2002. This can be found on Table 2 of the Title V Application.

Division's Response:

The DEP7007B forms in the original application for those points list the installation date as anticipated for 2003. However, addition of the equipment in October 2002 was confirmed with registration application Log # 296R and Table 2 of the original application. The statement in the Permit Application Summary Form and Statement of Basis was revised to include the addition of the equipment, and the description of the installation date for these points in the permit was revised to 2002.

Additionally, the emission point numbers were changed to EP 07 and 08 as a result of listing the Electric Batch Oven as a separate emission point.

- Comment 13: On page 11 of 19 of the draft permit, 7 refers to the actions taken during shutdowns and startups and upsets. The normal start up of the RTO calls for a bypass to exhaust off gas until the RTO reaches temperature. Does the facility have to notify DAQ during this event if it is a part of their plan reference "sic" in 2d?

Division's Response:

The facility does not have to notify DAQ during a bypass to exhaust off gas until the VRTO reaches temperature as long as this is a normal procedure for operation of the VRTO, and it is written as a portion of the start-up, shut down, and malfunction plan.

With the removal of the requirement to submit mixing and cleaning operation emission factors prior to issuance of the proposed permit, 2d. from the draft permit is now 2c. in the proposed permit.

- Comment 14: On page 11 of 19 of the draft permit, 7b refers to unplanned shutdowns. If the RTO were to fail and it would take days to get a part, such as a 400hp blower in, could the facility bypass the RTO for this time? The emissions for the entire year would be under the required 15%. This would not be a normal operating scenario, but it is not financially conceivable to have a spare 400hp blower.

Division's Response:

The facility can not bypass the VRTO. Operating Condition 1c. states that emissions from EP 01, 02, and 03 shall be routed to the VRTO at all times, and 1d. states that the VRTO shall be operating at all times that either of the two MLS production lines or the Electric Batch Oven is operating. The permittee is also reminded that according to paragraph 2b. (which references 401 KAR 59:225, Section 4(5)) compliance with the standard is demonstrated on a 24-hour average, not annual average.

Bypassing the VRTO while operating the equipment that must vent to it may result in a Notice of Violation (NOV), which can result in fines of up to $25,000 per day per violation, and could lead to permit revocation in accordance with 401 KAR 50:060, Section 2.

- Comment 15: On page 15 of 19 of the draft permit, 16d is missing EP 03 and EP 04 for construction authorization.

Division's Response:

Referencing the EP numbering from the draft permit, EP 03 (Minster Press) and EP 04 (Aqueous Wash Vent – MLS Line 1) were already installed in 1989 and 2000, respectively.

Based on emission point renumbering as a result of listing the Electric Batch Oven as a separate emission point, the points listed in this section have been corrected to EP 02 (MLS Line 2), EP 03 (Electric Batch Oven), and EP 06 (MLS Line 2 Aqueous Wash System) which should be the only points requiring construction authorization from this permit action.